

N<sup>o</sup> 16,150



A.D. 1903

*Date of Application, 22nd July, 1903*

*Complete Specification Left, 21st May, 1904—Accepted, 30th June, 1904*

### PROVISIONAL SPECIFICATION.

#### **Improved Automatic Discharging and Flushing Siphon**

I JOHN MERRILL 4 Manchester Rd. Sheffield, Engineer, do hereby declare the nature of this invention to be as follows:—

My object is to provide an automatic flushing siphon that will work with either sewage or water and more particularly in the discharge of bacteria beds and the like. To do so I construct a trapper siphon one part of which is connected to an air chamber placed in or in connection with an automatic flushing cistern the discharge of which will cause the main siphon to discharge.

Dated this 21st day of July 1903.

JOHN MERRILL.

### 10 COMPLETE SPECIFICATION.

#### **Improved Automatic Discharging and Flushing Siphon**

I JOHN MERRILL 4 Manchester Rd. Sheffield, Engineer, do hereby declare the nature of this invention and in what manner the same is to be performed, to be particularly described and ascertained in and by the following statement:—

15 My object is to produce an automatic discharging and flushing siphon that will work with either sewage or water and more particularly in the discharge of bacteria beds and the like. To do so I construct a trapped siphon one part of which is connected to an air chamber placed in or in connection with an automatic flushing cistern, the discharge of which will cause the main siphon  
20 to discharge. The accompanying drawing shews two chambers or beds A and B with the siphon C. C<sup>1</sup> l. in A and the discharging cistern E in B. Before putting into work, the siphon and discharging cistern require to be trapped as shewn at T and T<sup>1</sup> l. This having been done, if the bed A be now filled, when the liquid reaches the foot of the bell or dome C air is locked up in C and C<sup>1</sup> l  
25 and this air becoming compressed by the incoming liquid in A serves to carry a head proportioned to the depth of the two traps T and T<sup>1</sup> l. The bed A being filled & the flow shut off it can be discharged when required by filling the bed B. The top of the discharging cistern E is fixed at the level to which B is to be filled. When B is full the liquid flows into the cistern E which contains an air-chamber F and an automatic flushing arrangement D which operates when E is  
30 quite full. The liquid rising in E also rises in F & drives the air above the line T<sup>1</sup> l by means of the pipe P through the trap T. The cistern E being full the apparatus D, which may be any efficient automatic apparatus, discharges the

[Price 8d.]

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*Merrill's Improved Automatic Discharging and Flushing Siphon.*

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contents and the liquid in F falling again to the line T<sup>1</sup> 1 withdraws air out of C and C<sup>1</sup> 1 which being now no longer able to sustain the head of liquid, the siphon C. C<sup>1</sup> 1 is charged and empties A. Any number of beds or chambers can be operated in the like manner and in any rotation by placing E in the required position. The apparatus can be used as an ordinary flushing siphon by placing E in the same chamber as C. C<sup>1</sup> 1 and E can be operated by liquid supplied from any source as for instance water drawn from the mains. 5

Having now particularly described and ascertained the nature of my said invention and in what manner the same is to be performed I declare that what I claim is: 10

A flushing siphon operated by an automatic cistern and air chamber substantially as described and illustrated.

Dated this Twentieth day of May 1904

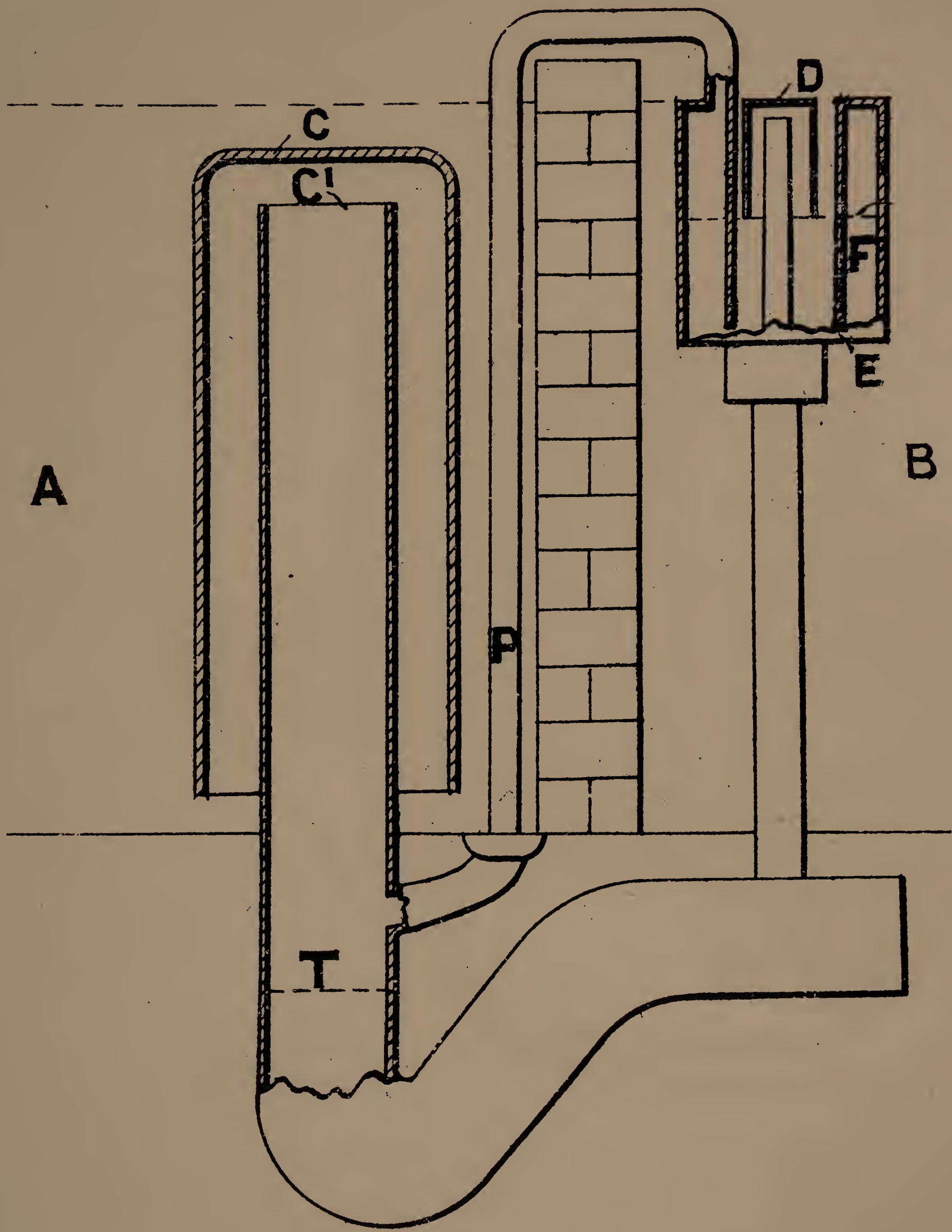
JOHN MERRILL.

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Redhill: Printed for His Majesty's Stationery Office, by Love & Malcomson, Ltd.—1904.







[This Drawing is a full-size reproduction of the Original.]

